





LIBRARY  
OF THE  
UNIVERSITY  
OF ILLINOIS

673

M52

Return this book on or before the  
**Latest Date** stamped below.

University of Illinois Library

DEC 31 1961

JUL -1 1970

MAR 28 1971

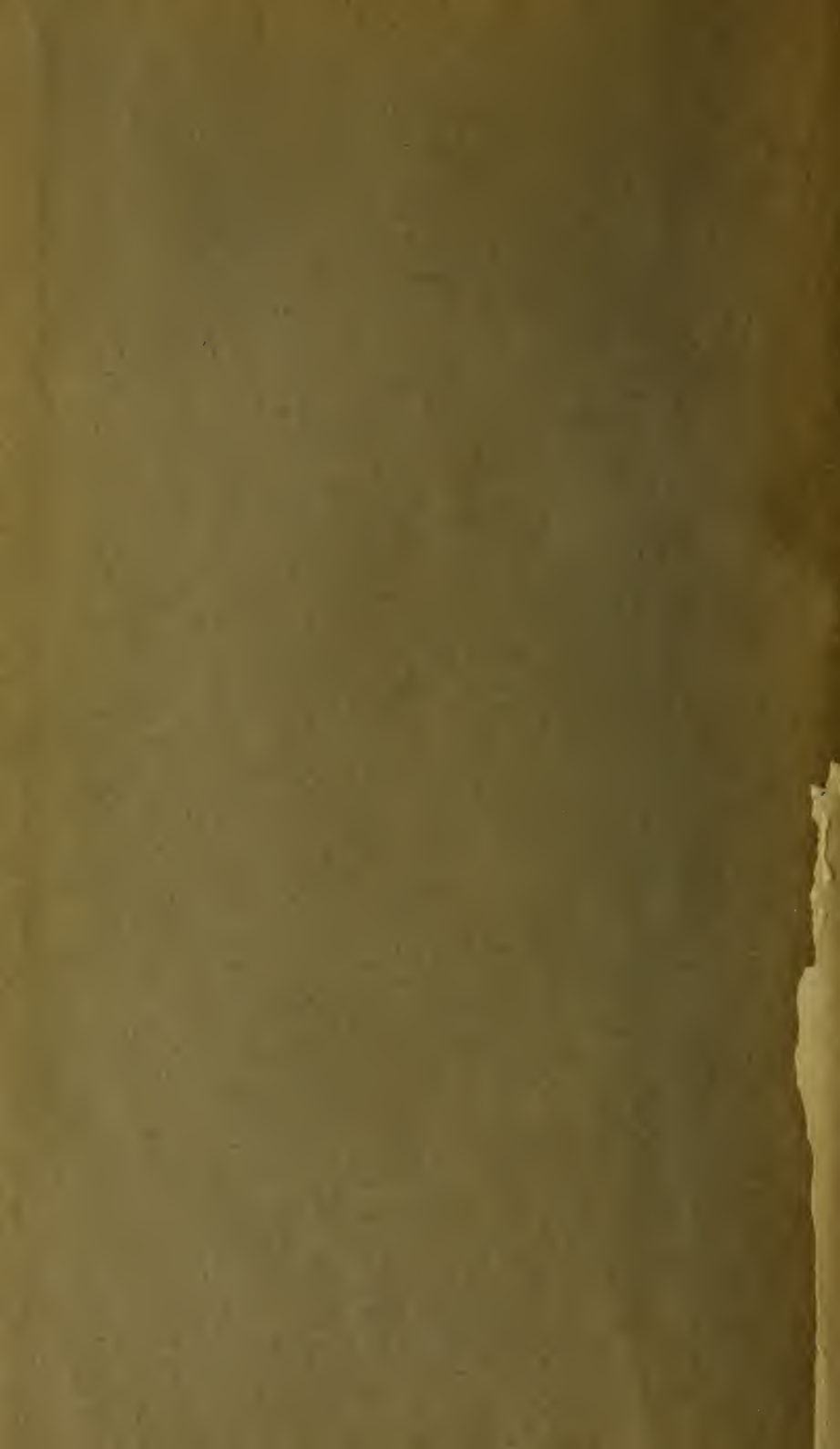
JUL 16 1977

JUN 24 1977

L161—H41







**MENEELY & KIMBERLY,**

**TROY, N. Y.,**

MANUFACTURERS OF

CHURCH, ACADEMY, TOWER-CLOCK,  
FACTORY, CHIME, COURT-HOUSE,  
FIRE-ALARM, AND OTHER

**BELLS,**

MOUNTED IN THE MOST APPROVED MANNER

AND

FULLY WARRANTED.

---

OFFICE AND FOUNDERY,  
22 AND 24 RIVER STREET, TROY, N. Y.

672  
2783

---

Entered according to Act of Congress, in the year eighteen hundred and seventy-eight, by  
MENEELY & KIMBERLY,  
In the office of the Librarian of Congress, at Washington, D. C.

---



673  
M52

CLINTON H. MENEELY, }  
GEORGE H. KIMBERLY }

OFFICE OF

MENEELY & KIMBERLY'S BELL FOUNDERY,

TROY, N. Y.

THIS Catalogue (revised edition) is presented to the attention of parties contemplating the purchase of Bells, in the belief that it will amply provide them with the necessary information preliminary thereto. The ordinary question of inquiry in respect to the weights and tones of bells, their mountings, means of transportation, manner of hoisting into tower, &c., find answers, herein, under their appropriate headings. The price, per pound, at which bells are offered is the only item which cannot be published in this form, inasmuch as the metals of which they are composed possess a fluctuating value to which that of bells must, in a measure, correspond. We are always prepared, however, to name the lowest price at which bells, of genuine bell-metal composition, can be furnished, but can never agree, under any circumstances, to manufacture bells of inferior grade at corresponding or other prices, fully realizing that bells, which are in any way deficient, are properly considered out of place in the present day.

A guarantee as to excellence of tone and composition as well as to durability of casting, accompanies each bell of our manufacture, and to every one of which a thor-

p1283

ough ringing test is given before shipment. It is little to claim that every bell furnished by us possesses all of the quality, volume, and prolongation of tone which the given weight of metal is capable of producing, while our full guarantee is given with every bell, that no metal or metals have entered into its composition other than pure copper and pure tin — the only metals which as the experience of ages and many authoritative tests have demonstrated, are capable of producing a good ringing alloy.

The facilities of manufacture which we possess would, alone, guarantee success in our work. Our foundry buildings are new and thoroughly complete in every part. All of the patterns, of both bells and mountings, designed by the closest calculation, together with melting furnace, flasks, etc., etc., are new and of that character which study and much experience have shown to be most nearly perfect. The forms and proportions of the bells are secured by a due regard to the laws of acoustics and other natural guides, which render unerringly correct the production of any desired tone or qualities of sound.

To the proper mounting of bells, (this subject is fully treated elsewhere,) we have given a consideration quite in proportion to that of their successful manufacture, and can safely claim that our "Rotary Mountings" are the most efficient of any now in use, and herein invite investigation. The adaptability of each part of the mountings to the bell is plainly recognized, especial attention having been given to the firm hold of the yoke on the bell ; to the simple arrangement by which

the yoke permits the bell to be turned upon its vertical axis, so as to cause the clapper to strike in a new place and prevent liability of fracture ; to the ease with which the bell is made to swing ; and to the use of material in those forms which, it is well known, yield the greatest strength.

Making the bell business, in all of its branches, a specialty, to which our undivided attention is given, and into which much accumulated experience has been brought, we do not hesitate to claim that we can satisfactorily fulfill any demand in this line, of whatever character. The unqualified success which our bells have attained in every section of our country ; South America ; China ; India, and, in fact, throughout the remotest parts of the world, still further justifies us in this assertion.

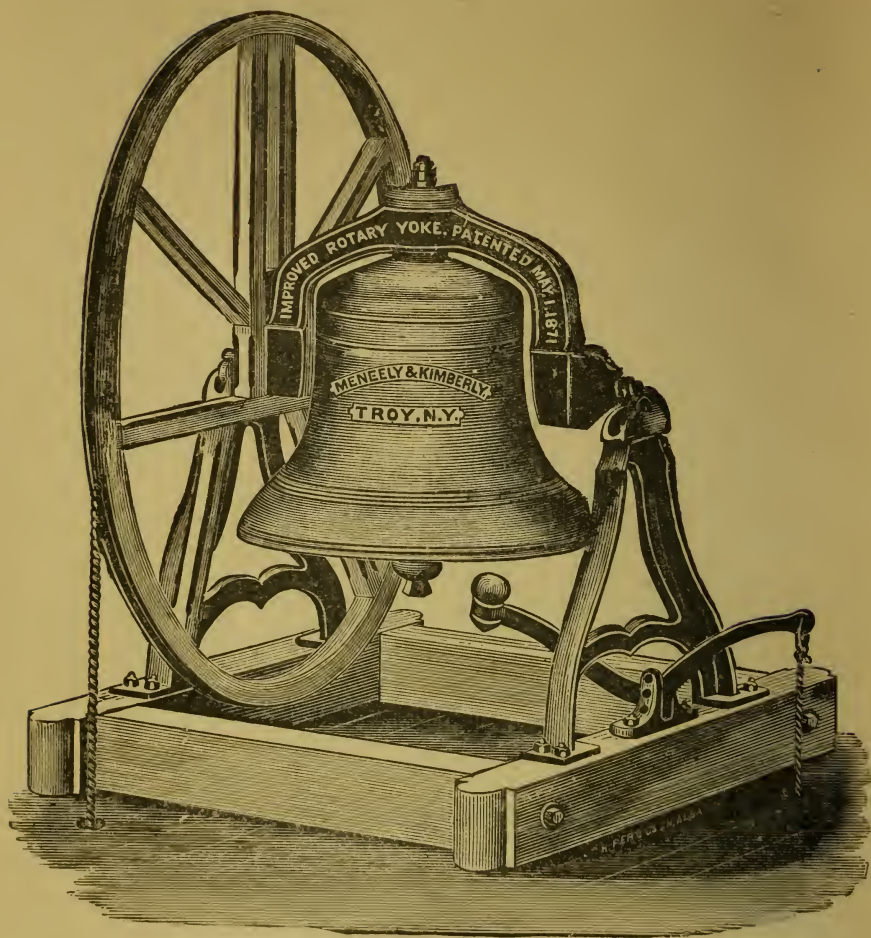
Especially do we invite those who are in any way interested in these matters, to a personal inspection of our establishment ; its facilities of manufacture ; stock on hand, &c., with a view to their own satisfaction.

Communication by letter is also solicited.

MENEELY & KIMBERLY,

22 and 24 River Street,

TROY, N. Y.



### Church Bells,

Fully warranted as to excellence of tone, purity of composition and strength of casting, mounted in the most approved manner, of weight, dimensions, &c., noted in the accompanying table. The mountings consist of our "CONICAL ROTARY YOKE," (described on page 14, and for which letters patent have been granted,) so arranged as to firmly sustain the bell, greatly decrease the liability



of fracture, and essentially lessen the labor of ringing, together with WHEEL, FRAME, STANDARD and TOLLING HAMMER of best material and forms of construction. STEEL SPRINGS are also furnished. The bell has its bearings upon trunnions running through the yoke-arms and body, thus effectually preventing the shaking of the frame or jarring of the tower by loose action. Mountings of special size or design, for bells of any weight, furnished to order. FRICTION ROLLERS accompany large bells.

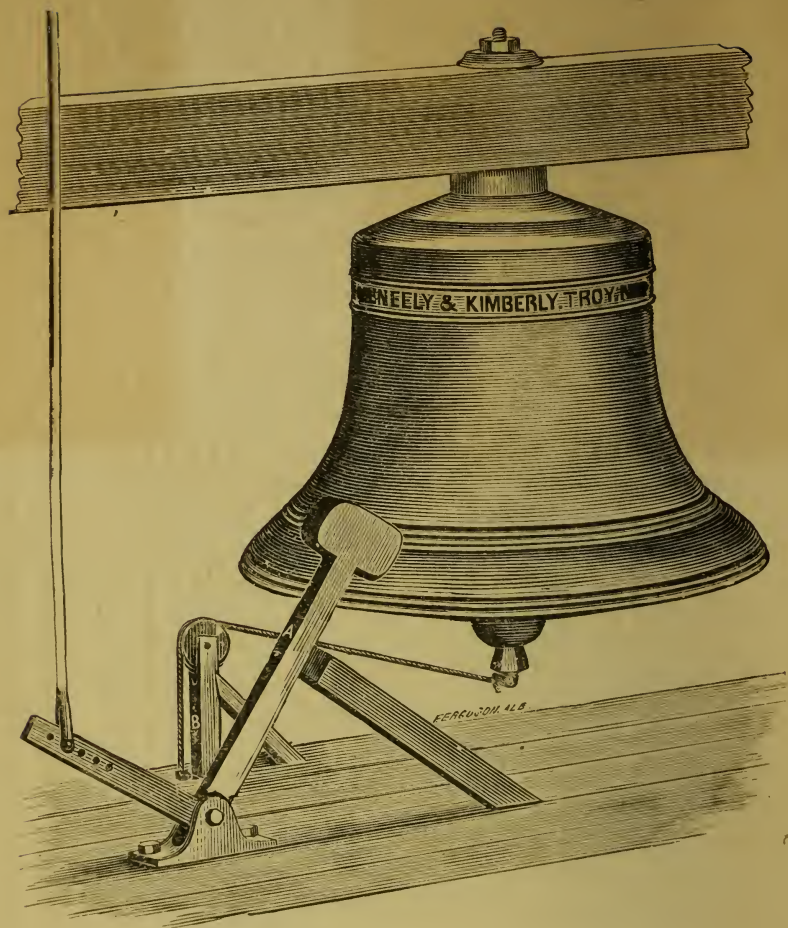
| BELL.    |                |           | MOUNTINGS.                  |                    |                     |
|----------|----------------|-----------|-----------------------------|--------------------|---------------------|
| Weight.  | Medium Tone.   | Diameter. | Size of Frame, outside.     | Diameter of Wheel. | Price of Mountings. |
| 400 lbs. | D              | 27 in.    | 3 ft. 6 in. by 3 ft. 6 in.  | 4 ft. 4 in.        | \$ 30               |
| 450 "    | C#             | 28 "      | 3 ft. 6 in. by 3 ft. 6 in.  | 4 ft. 4 in.        | 30                  |
| 500 "    | C#             | 29 "      | 3 ft. 9 in. by 3 ft. 11 in. | 4 ft. 6 in.        | 35                  |
| 550 "    | C              | 30 "      | 3 ft. 9 in. by 3 ft. 11 in. | 4 ft. 6 in.        | 35                  |
| 600 "    | B              | 31 "      | 3 ft. 9 in. by 3 ft. 11 in. | 4 ft. 6 in.        | 35                  |
| 700 "    | B              | 33 "      | 4 ft. 1 in. by 4 ft. 5 in.  | 5 ft. 6 in.        | 40                  |
| 800 "    | B <sub>b</sub> | 34 "      | 4 ft. 1 in. by 4 ft. 5 in.  | 5 ft. 6 in.        | 40                  |
| 900 "    | A              | 36 "      | 4 ft. 5 in. by 4 ft. 7 in.  | 5 ft. 9 in.        | 45                  |
| 1000 "   | A              | 37 "      | 4 ft. 5 in. by 4 ft. 7 in.  | 5 ft. 9 in.        | 45                  |
| 1100 "   | A              | 38 "      | 4 ft. 8 in. by 4 ft. 11 in. | 5 ft. 9 in.        | 45                  |
| 1200 "   | A <sub>b</sub> | 39 "      | 4 ft. 8 in. by 4 ft. 11 in. | 6 ft. 3 in.        | 55                  |
| 1300 "   | A <sub>b</sub> | 40 "      | 4 ft. 8 in. by 4 ft. 11 in. | 6 ft. 3 in.        | 55                  |
| 1400 "   | G              | 41 "      | 5 ft. 0 in. by 5 ft. 3 in.  | 6 ft. 6 in.        | 70                  |
| 1500 "   | G              | 42 "      | 5 ft. 0 in. by 5 ft. 3 in.  | 6 ft. 6 in.        | 70                  |
| 1600 "   | F#             | 43 "      | 5 ft. 0 in. by 5 ft. 3 in.  | 6 ft. 6 in.        | 70                  |
| 1800 "   | F#             | 45 "      | 5 ft. 5 in. by 5 ft. 8 in.  | 7 ft.              | 90                  |
| 2000 "   | F              | 46 "      | 5 ft. 5 in. by 5 ft. 8 in.  | 7 ft.              | 90                  |
| 2100 "   | F              | 47 "      | 5 ft. 5 in. by 5 ft. 8 in.  | 7 ft.              | 90                  |
| 2300 "   | E              | 49 "      | 5 ft. 5 in. by 6 ft. 1 in.  | 7 ft. 6 in.        | 115                 |
| 2500 "   | E              | 50 "      | 5 ft. 5 in. by 6 ft. 1 in.  | 7 ft. 6 in.        | 115                 |
| 2800 "   | E <sub>b</sub> | 51 "      | 6 ft. 2 in. by 6 ft. 9 in.  | 8 ft.              | 130                 |
| 3000 "   | E <sub>b</sub> | 53 "      | 6 ft. 2 in. by 6 ft. 9 in.  | 8 ft.              | 130                 |
| 3500 "   | D              | 56 "      | 6 ft. 2 in. by 6 ft. 9 in.  | 8 ft.              | 140                 |
| 4000 "   | C#             | 58 "      | 6 ft. 2 in. by 6 ft. 9 in.  | 8 ft.              | 140                 |
| 4500 "   | C              | 61 "      | 6 ft. 2 in. by 6 ft. 9 in.  | 8 ft.              | 140                 |
| 5000 "   | C              | 63 "      | 7 ft. 2 in. by 7 ft. 8 in.  | 9 ft.              | 165                 |
| 5500 "   | B              | 65 "      | 7 ft. 2 in. by 7 ft. 8 in.  | 9 ft.              | 175                 |
| 6000 "   | B <sub>b</sub> | 67 "      | 7 ft. 2 in. by 7 ft. 8 in.  | 9 ft.              | 190                 |

The actual weights usually exceed those designating the patterns, noted above, from two to three per cent.

The medium, in the range of tones, which the given weight of metal is capable of producing, is that referred to. This range of tone (quality considered) is necessarily very limited.

The fractional parts of an inch are taken as a whole in the measurement of diameters, given above.

The price of a bell is computed by the pound. The mountings are an additional charge.



### Fire-Alarm and Tower-Clock Bells,

Of any weight, with or without mountings, and provided with the most approved striking apparatus, if desired.

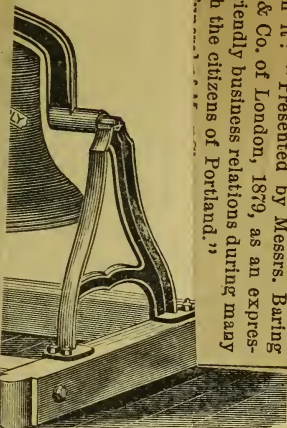
Special information as to the weights, dimensions, tones, &c., of bells of this class, suited to any location, as well as to various systems of mounting and striking, together with illustrations, representing two forms of mounting, furnished upon inquiry.

# St. Peter's Church Chime, Albany.

All of the Albany papers speak in the very highest terms of the chime of bells recently placed in the tower of St. Peter's church by Meneely & Kimberly of this city. These bells were rung for the first time on Christmas eve to the unbounded satisfaction of hundreds of the leading citizens—ladies and gentlemen who crowded the streets at midnight, despite the storm, listening and applauding. This chime is especially commended by the music-loving and music-judging community for its purity of tone, accuracy of pitch and perfect ringing adjustment.

The *Albany Evening Journal* says: "Messrs. Meneely & Kimberly, of Troy, the manufacturers of the Tweddle chimes, have great reason to congratulate themselves over their work. The eleven bells are so many unimpeachable witnesses to the rare proficiency which they have attained—a proficiency which has given them a reputation as bell makers second to that of no firm in the country." The Albanians, in this case, seem very willing to admit that some good can come out of Troy.

## KIMBERLY'S BELLS



H. PERCUSH, ALBANY N.Y.

propose to be behind the times. — Meneely & Kimberly of this city received an order yesterday for a bell to cost \$1,000 and to be the gift of a distinguished banking firm in London, England, to a church in Portland, Me. The bell is to have the following inscription cast upon it: "Presented by Messrs. Baring Brothers & Co. of London, 1879, as an expression of friendly business relations during many years with the citizens of Portland."

## Academy, Factory and Depot Bells,

Of weight from 100 lbs. to 375 lbs., as per accompanying table, with complete mountings, including "ROTARY YOKE," so arranged as to permit the ready turning of the bell and prevent liability of fracture; WHEEL of Iron; Substantial FRAME, and Iron STANDARDS. Steel SPRINGS are also furnished. Small Churches, Chapels, &c., are frequently supplied with bells of this class.

| BELL.    |           | MOUNTINGS.                   |                     |
|----------|-----------|------------------------------|---------------------|
| Weight.  | Diameter. | Size of Frame, Outside.      | Price of Mountings. |
| 100 lbs. | 17 in.    | 2 feet 5 in. by 2 feet 8 in. | \$13.00             |
| 125 "    | 18 1/2 "  | 2 " 6 " 2 " 8 "              | 13.00               |
| 150 "    | 19 1/2 "  | 2 " 6 " 2 " 8 "              | 15.00               |
| 175 "    | 20 1/2 "  | 2 " 8 " 3 " 1 "              | 20.00               |
| 200 "    | 21 1/2 "  | 2 " 8 " 3 " 1 "              | 20.00               |
| 225 "    | 22 "      | 2 " 8 " 3 " 1 "              | 20.00               |
| 250 "    | 23 "      | 3 " 0 " 3 " 2 "              | 23.00               |
| 275 "    | 24 "      | 3 " 0 " 3 " 2 "              | 23.00               |
| 300 "    | 24 1/2 "  | 3 " 1 " 3 " 4 "              | 23.00               |
| 325 "    | 25 "      | 3 " 1 " 3 " 4 "              | 25.00               |
| 350 "    | 26 "      | 3 " 1 " 3 " 4 "              | 27.00               |
| 375 "    | 26 1/2 "  | 3 " 1 " 3 " 4 "              | 27.00               |



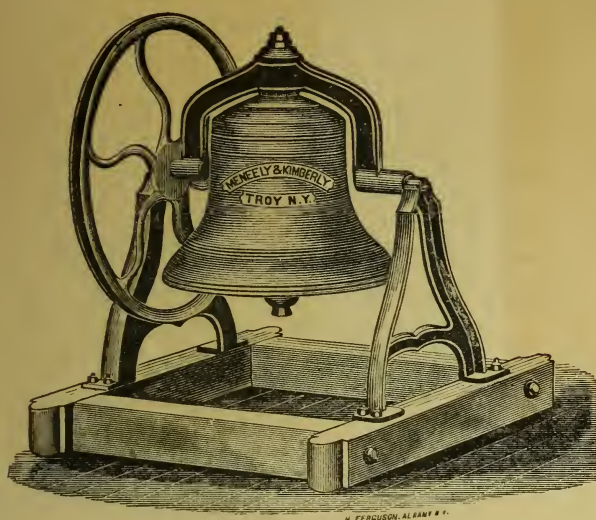


### Fire-Alarm and Tower-Clock Bells,

Of any weight, with or without mountings, and provided with the most approved striking apparatus, if desired.

Special information as to the weights, dimensions, tones, &c., of bells of this class, suited to any location, as well as to various systems of mounting and striking, together with illustrations, representing two forms of mounting, furnished upon inquiry.





### Academy, Factory and Depot Bells,

Of weight from 100 lbs. to 375 lbs., as per accompanying table, with complete mountings, including "ROTARY YOKE," so arranged as to permit the ready turning of the bell and prevent liability of fracture; WHEEL of Iron; Substantial FRAME, and Iron STANDARDS. Steel SPRINGS are also furnished. Small Churches, Chapels, &c., are frequently supplied with bells of this class.

| BELL.    |           | MOUNTINGS.                   |                     |
|----------|-----------|------------------------------|---------------------|
| Weight.  | Diameter. | Size of Frame, Outside.      | Price of Mountings. |
| 100 lbs. | 17 inch.  | 2 feet 5 in. by 2 feet 8 in. | \$13.00             |
| 125 "    | 18½ "     | 2 " 6 " 2 " 8 "              | 13.00               |
| 150 "    | 19½ "     | 2 " 6 " 2 " 8 "              | 15.00               |
| 175 "    | 20½ "     | 2 " 8 " 3 " 1 "              | 20.00               |
| 200 "    | 21½ "     | 2 " 8 " 3 " 1 "              | 20.00               |
| 225 "    | 22 "      | 2 " 8 " 3 " 1 "              | 20.00               |
| 250 "    | 23 "      | 3 " 0 " 3 " 2 "              | 23.00               |
| 275 "    | 24 "      | 3 " 0 " 3 " 2 "              | 23.00               |
| 300 "    | 24½ "     | 3 " 1 " 3 " 4 "              | 23.00               |
| 325 "    | 25 "      | 3 " 1 " 3 " 4 "              | 25.00               |
| 350 "    | 26 "      | 3 " 1 " 3 " 4 "              | 27.00               |
| 375 "    | 26½ "     | 3 " 1 " 3 " 4 "              | 27.00               |



### Steamboat and Ship Bells,

Of weight from 100 to 700 lbs., furnished with "ROTARY YOKE," for the ready turning of the bell, and a LEVER ARM so attached as to allow free action to the rope.

Bells of this class are polished to order, and supplied with GALLOWS—FRAMES or mountings of any design.

| Weight.  | Price of Mountings. | Weight.  | Price of Mountings. | Weight.  | Price of Mountings. |
|----------|---------------------|----------|---------------------|----------|---------------------|
| 100 lbs. | \$12                | 250 lbs. | \$20                | 450 lbs. | \$25                |
| 150 "    | 12                  | 300 "    | 20                  | 500 "    | 30                  |
| 175 "    | 17                  | 350 "    | 20                  | 600 "    | 30                  |
| 200 "    | 17                  | 400 "    | 25                  | 700 "    | 30                  |

### Court-House Bells,

Of weight, dimensions, tones, &c., noted in table on page 7, mounted in the full manner of Church Bells, as shown in cut on page 6, and complete in every respect.

---

### Fog-Alarm and Light-House Bells,

Of any weight, provided with mountings specially adapted.

---

### Locomotive Bells,

Of weight from 60 lbs. to 125 lbs., either plain or polished, constructed with shank of any size or shape.

---

### Plantation and Farm Bells,

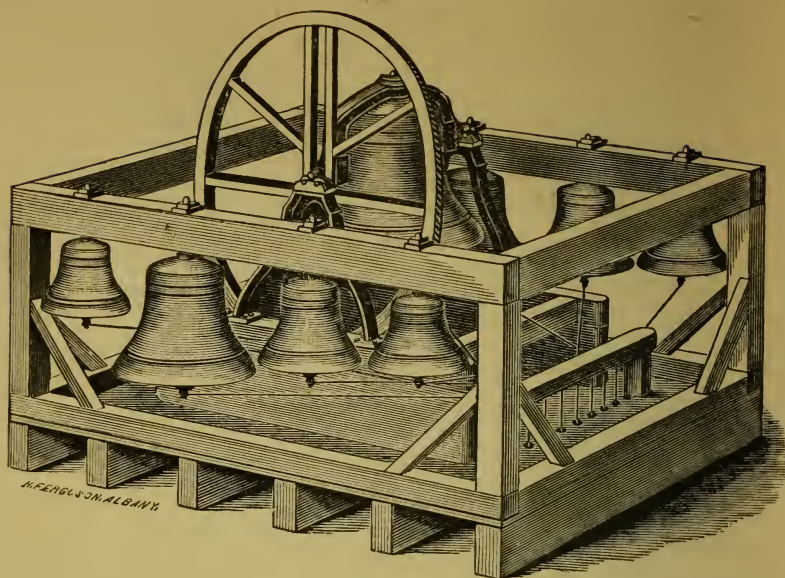
Of weight from 15 lbs. to 80 lbs., mounted with YOKE and LEVER TAIL, and provided with IRON BEARINGS for the trunnions.

| Weight. | Price of Mountings. | Weight. | Price of Mountings. | Weight. | Price of Mountings. |
|---------|---------------------|---------|---------------------|---------|---------------------|
| 15 lbs. | \$2 50              | 30 lbs. | \$3 00              | 60 lbs. | \$4 00              |
| 20 "    | 2 50                | 40 "    | 3 50                | 70 "    | 4 00                |
| 25 "    | 3 00                | 50 "    | 3 50                | 80 "    | 4 50                |

---

### Bells,

Designed for special use, of any number, weight and style of finish, or information relating thereto, promptly furnished.



### Chime and Peal Bells,

Of any weight and number, with or without mountings, and adapted to any position. The number of bells necessary to constitute a chime or peal is not limited, but in this country a *chime* is generally said to consist of eight bells attuned to the eight tones of the octave, or diatonic scale. In nearly every case a bell, attuned to the flat seventh tone of the scale, is added, inasmuch as the chime is thus rendered capable of producing music in two keys. In some cases a bell, attuned to the sharp fourth tone of the scale, is also added, so as to produce music in a third key. More frequently, however, all of the bells which are added after that representing the flat seventh tone are attuned so as to follow the octave in natural succession. The only limit as to number, in this respect, is that suggested by the necessarily constant decrease of weight and the consequent feebleness of tone.

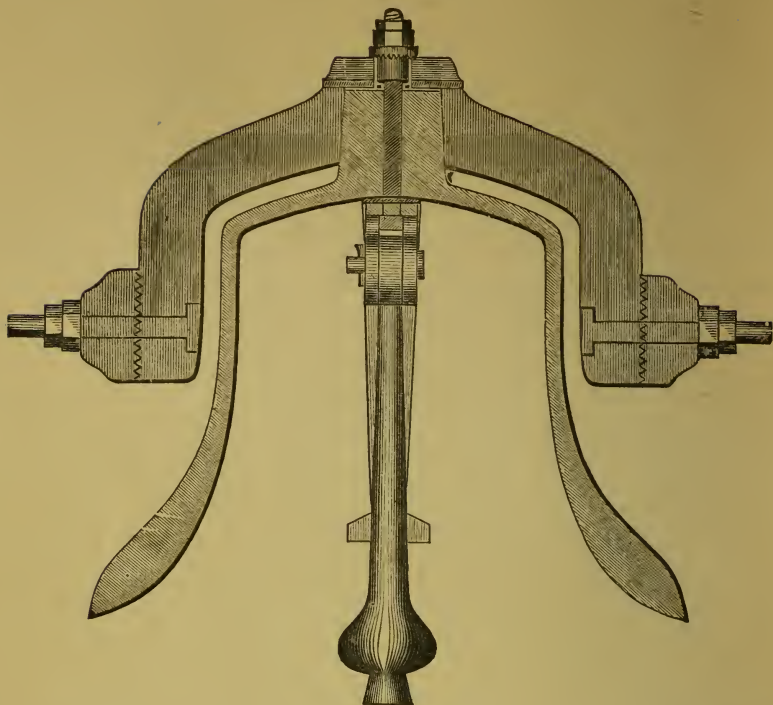


The accompanying cut shows a simple method of mounting chime bells. All of the bells, with the exception of the *tenor*, or largest, (which is mounted in the full manner of a church bell, as shown on page 6, so that it can be rung independently of the others, as occasion may require), are suspended, stationarily, from a frame-work, suited to the tower, and are sounded by means of cords and rods leading from the ends of the clappers and passing through pulleys to the position of the ringer, where they are attached by movable straps, to manuals, in the form of levers, which are operated by a single player.

A *peal*, in this country, is, generally, said to consist of three bells attuned to the first, third and fifth tones of the musical scale, or four bells, the eighth musical tone being thus added. These bells are, usually, provided with full mountings, and are sounded, by swinging, in the manner of church bells.

As it is not unusual to add to a single bell a number of bells, so as to form a peal or a chime, we retain the exact key of every large bell sent out by us, and are thus readily enabled to provide the additional number of bells correct in tone.

We are always prepared to furnish complete information, (accompanied by detailed drawings), as to chimes or peals of bells of any number, weight, etc., with cost, delivered complete and in proper ringing order, in any desired position. To this end it is essential for us to know the size of the bell chamber, its distance from the ground and height of ceiling, together with the location and dimensions of windows, &c.



### Meneely & Kimberly's Patent Rotary Yoke.

This yoke is, unhesitatingly, pronounced to be not only of recent design, (patent granted May 9th, 1871), but the most efficient of any now in use, and exceedingly simple in its construction and operation, while it may be claimed to be of superior appearance also. No pains or expense have been spared in its design nor in the completion of its patterns. The advantages of this yoke consist in the firm hold which it secures upon the bell; in the ease with which it permits the bell to be turned around, while still mounted, so as to cause the clapper to strike in a new place and prevent liability of fracture, and in the ready change which it allows in the adjustment of its poise to the convenience of the ringer.

The construction and operation of this yoke are shown, to some extent, in the accompanying cut, in connection with that on page 6. As will be noticed, a round, tapering shank is cast upon the top of the bell, and upon this, the yoke, fitted to correspond, has a firm bearing. The bell is supported by a large bolt running through the centre of the shank. The bolt has its bearing, above, on a circular plate fitted to and covering the crown and aperture of the yoke. The clapper and spring are constantly kept in proper position by means of the bolt, which is made square below the screw, and is fitted with a washer, toothed around on its lower side and bearing upon the top of the circular plate, out of which rise several teeth, corresponding to those of the washer.

It is simply necessary, in order to rotate the bell, to unscrew the bolt so that the bell is loosened a little in the yoke, when it can be readily turned to any desired extent (the plate and bolt moving with it) by taking hold of it at the rim. The bell is again placed in condition for ringing by turning the spring (which carries with it the clapper and bolt) so that it stands at right angles with the axis of the yoke, after which the nut of the bolt is screwed down.

A bell is made to swing with more or less ease by changing the position of the notched arms, through which the trunnions pass, but as we arrange every bell to swing properly, when tested at the foundery prior to shipment, it is better not to disturb the position of these arms. A little practice almost invariably overcomes the supposed difficulty attending the ringing of a new bell.

### Clapper Springs.

Bells of 100 lbs. and upwards have SPRINGS attached to them (as shown in cut on page 14) to prevent the clapper from resting on the bell, after the blow has been given. An exceedingly disagreeable, jarring sound is thus avoided and the bell is enabled to give out its tone, full and clear. The noise which the action of the clapper upon the bare spring would produce is obviated by the use of leathers riveted upon the ends of its arms, the renewal of which is necessary, as they become worn. In case either arm of the spring, at any time, stands so near to the bell as not to prevent the rebound of the clapper, it can be forced a little further out by inserting a bar between it and the side of the bell.

### Tolling Hammer.

A TOLLING HAMMER is attached to the frame of all bells of 400 lbs. weight and upwards (see cut on page 6), by means of which the bell can be tolled in a manner very prompt and clear. This hammer is so arranged, in its connection with the frame, that its length of arm can be changed to meet any change in the position of the yoke-arms and consequent raising or lowering of the bell, it being essential for the safety of the bell as well as for the quality of tone produced, that the blow of the hammer falls in the proper place. Care should be taken that the tolling hammer, by thoughtless pulling, or otherwise, is not allowed to get in the way of the bell while swinging, as it might thus become broken or throw the bell out of the standards.



## Stop.

A STOP, or CLUTCH, is attached to the top of the wheel of all bells of heavy weight, and a sliding buffing-piece to the inside of the frame beneath, this, latter, working against a steel spring, (our recent invention), by the action of which, the one against the other, the bell is prevented from being thrown over when rung with its mouth fully up, and violent jarring or straining of tower and mountings is avoided.

## Warranty.

The following is the form of WARRANTY which we attach to the bill of sale of all bells of 100 lbs. and upwards :

"The above-mentioned Bell is warranted to be of good composition and of perfect tone (the purchaser to decide in this matter), and is also warranted not to break, while being used in the proper manner, for the term of two years from this date. In case of failure in either of these respects, and immediate notification of the fact be furnished us, our agreement is to re-cast the bell, or provide another which will be satisfactory, free of charge ; the purchaser to bear expense of transportation."

## Old Bells.

OLD BELLS, made of pure bell-metal, are received by us in part payment for new ones. We do not purchase any old or mixed metals at any price.

## Inscriptions.

INSCRIPTIONS, of any desired character, are cast, without extra charge, upon bells made to order.

## Moulding Cases.



All of our bells are moulded in perforated iron cases, by the use of which we are enabled to secure castings thoroughly sound and excellent in finish, and, therefore, capable of producing clearness of tone. The accompanying cut shows the form of these cases. Porous loam and other substances compose the material which is put upon the cases in varying thicknesses, to which the necessary form and finish are given by the use of sweep-patterns shaped in such a manner as to secure by their revolution about a common centre, surfaces corresponding to the outer and inner portions of the intended bell. As bell metal shrinks in cooling, the inner case, before the loam is placed upon it, is wrapped about with straw rope, the charring of which, by the heat of the metal in pouring, gives room for the necessary contraction and prevents the straining of the metal. The moulds are closed upon each other in a manner securing exact regularity of thickness in the space within. The metal is poured in at the head. The gases generated in the metal, and which, if allowed to remain in the moulds, would produce explosion, or, at least, cause a porous casting, find vent in the perforations. These cases, also, serve to the advantage of the bell in allowing it to cool, after casting, in such a manner as to secure precise uniformity throughout.

## Transportation.

Having our works centrally situated in the city of Troy, which city stands unrivalled no less in its convenience of location than in the extent of its manufacturing interests, we are enabled to avail ourselves of the advantages of shipment in every direction, thus offered, by railroad, canal and tide-water navigation, with the greatest promptness and dispatch.

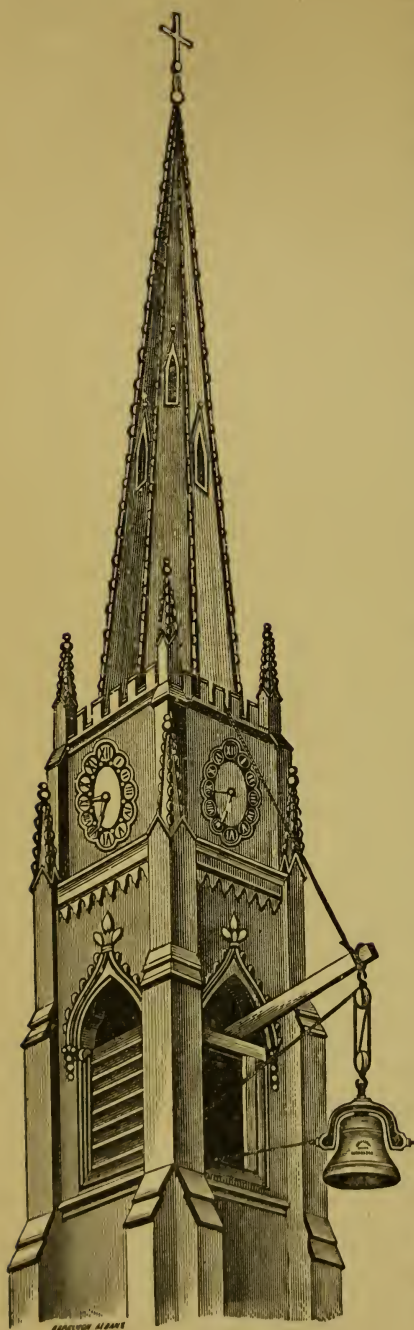
In view of the various routes open to us it is desirable that parties in ordering bells, should designate the manner of shipment. In the absence of definite instructions we always forward bells in the manner which we deem to be for the best interests of the purchaser.

Special pains are taken in the preparation of all bells and mountings for safe shipment.

## Mounting and Ringing Bells, &c.

The bell-chamber should not be placed any higher in the tower than is necessary in order to bring the position of the bell, when mounted, just above the level of the tops of the surrounding houses. This room should be especially arranged to permit the free egress of the sound. It should be tightly ceiled directly above the tops of the windows, which latter should be as wide, and nearly open, as possible, and should be extended almost to the floor in order that the bell, when at rest, may have its mouth above the level of their base. The floor beneath the bell should, also, be tightly closed.

It is usual to construct the tower in such a manner that the bell can be readily hoisted to its position through openings on the inside. Since, however it is

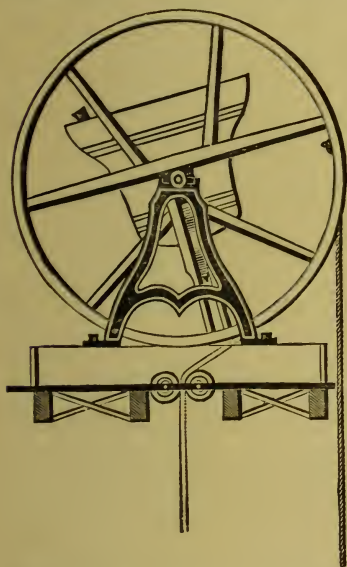


frequently necessary to raise the bell on the outside, we have furnished the accompanying cut, together with the following instructions, showing simple means of getting the bell into its place:

First, a strong beam is projected, at an elevated angle, from the top of a window in the bell-chamber, and is thus securely fastened. The tackle is attached to the end of this beam, and the power is applied either from within the tower or by running the rope to the ground and through a stationary pulley, where it may be drawn upon by any number of men, a team of horses, or a mechanical hoisting apparatus. When the bell has been raised to a sufficient height it can be drawn into the tower by the guide-rope or by a small tackle. Prior to the hoisting of the bell the frame should be raised, and placed so that it has a firm and level bearing. If necessary, the



standards may be removed from the frame, and the frame taken to pieces. The wheel should, also, be raised prior to the bell, and placed upon the proper side of the tower, ready for attachment. It will be noticed that the wheel must, necessarily, be placed upon the side of the frame opposite to that which the tolling hammer is to be attached. When the bell is mounted, the standards should have small, wooden braces set up against them, sidewise, (bearing against the wall of the tower at the intersection of the floor), so as to prevent any fracture or straining in that direction. The clapper bolts should be well oiled, when inserted, and its key open at the end so as to prevent its falling out.



The rope is attached in the manner shown in the accompanying cut. Whenever the weight of the bell permits, it is usual to let the rope pass down through sheaves directly under the centre of the wheel, by which arrangement the bell can be swung completely over without disarranging the rope. In the case of bells of heavy weight since any additional

friction would materially increase the labor of ringing, it is usual to let the rope fall in a direct line from the outer portion of the wheel and pass through the floor without the use of sheaves. To guard against the throwing over of the bell, and, from the manner of its

attachment, the consequent disarrangement of the rope, a *stop*, as described at page 17, is attached to the outside of the wheel, at its top, and another to the inside of the frame, at the bottom, which, acting upon each other, arrest the motion of the bell. Our most excellent spring attachment prevents any injury to the mountings, or jar of tower, by the sudden action of this stop.

The size of the bell-rope is an important consideration, inasmuch as a rope of much larger size than the simple power required for ringing would suggest, is generally selected in order to suit the grasp of the ringer's hand, and this, by its weight and stiffness, is apt to impede the free swinging of the bell. Below is appended a list of the sizes of rope which, experience has shown, are suitable for bells of various weights.

|   |                   |
|---|-------------------|
| For bells from 100 lbs. to 400 lbs..... | 1-2 in. diameter. |
| “ “ “ 500 “ 800 lbs.....                | 5-8 “ “           |
| “ “ “ 900 “ 1,500 lbs.....              | 3-4 “ “           |
| “ “ of 1,600 lbs. and upwards.....      | 1 “ “             |

The tolling hammer rope can be of any size, however small, of sufficient strength, inasmuch as it is usual to attach a clutch at its end, for the grasp of the hand.

The bell and its mountings should be examined, from time to time, to see if the several nuts are properly screwed up and the other parts are in order, and oil should be placed upon the trunnion-bearings as often as required, but not in sufficient quantity to allow of its dripping and accumulating upon the bell, to the consequent injury of its tone.

# BELLS

---

It is impossible to trace the origin of bells. They were commonly known in the earliest ages, and are thus referred to by the most ancient writers. Doubtless bells, so called, were at first little more than concave pieces of metal, the natural sound of which suggested their use for certain purposes, and in this form their origin may, quite probably, be said to date from the discovery of the sonorous qualities of metals. Further as to the antiquity of bells, an old painting of King David represents him as playing, with a hammer, upon a number of bells hung up before him, while one old writer gravely avers that Tubal Cain, "the instructor of every artificer in brass and iron," formed the sounding metal into a kind of rude bell, and that Noah employed a similar instrument to summon his ship carpenters to their work. The thorough knowledge possessed by the ancients in the working of metals render such statements not altogether absurd.

It should be added that bells appear to have been nearly universally, as well as anciently known. Rude tribes, inhabiting before undiscovered islands in the midst of the sea, have been found in the common possession of them. Those taken from the tombs of the Peruvians, and some small bells brought by a trading canoe of Indians to Columbus, at Cape Honduras, show that they were known in America prior to its discovery by Europeans. The caldrons of Dodona, which closely

resembled the Indian gong, are known to have been of very ancient origin. Possibly some Assyrian bells, found by Mr. Layard in the palace of Nimroud, may be regarded as the oldest bells in the world of which there is any positive information.

The origin of the name *bell* is not definitely known. By some it is supposed to have been derived from the Latin word *pelvis*—a basin ; the shape being thus designated. Others claim that it was derived from the Saxon word *bellan*—to bawl. Burder in his writings of the East, says that bells derived their name from the Sun, which was called Baal or Bel, from his supposed dominion over everything ; that he was considered the author of vibratory motion and the source of musical sound, and that such instruments as produced sound by percussion were called *bells*.

Bells of small size, as has been stated, were first in use. They are referred to by Moses in the book of Exodus, as being attached to the vestment on the high priests in the sanctuary ; by the prophet Isaiah, as being worn at the feet of women, and by the prophet Zechariah, as being hung on the necks of horses. The ancient Persians had bells attached to their royal costumes, the same as, in later days, the chief men and civil officers of the Germans had them suspended to their garments. In Egypt and other countries, girls wore strings of bells about their anklets as is common in Cairo at the present day. They were used in the camps and garrisons of the Greeks, were hung in triumphal cars, were sounded in the markets, proclaimed feasts, preceded funeral processions, and were, sometimes, used in the temples. They were also hung on the necks of malefactors on their way to execution, and from this Greek custom, it is said, was derived the Roman one, of hanging a bell and a scourge to the Emperor's chariot that, in the height of his pros-



perity, he might be admonished against pride and be mindful of human misery, The Romans used bells to denote the hours of bathing and public business, and to assemble families. A silver bell was the prize formerly run for at races, hence the expression, "Bearing away the bell." The ancient shepherds appended bells to their flocks, by the sound of which, it was thought, they grew fat. They were also attached to the necks of horses, by both the Greeks and the Romans, to accustom them to noise and prepare them for battle, and it was from this custom that a person who had not been tried or trained, was called, "one not used to the noise of the bell." With this seemingly full knowledge of the use of bells, it appears singular that the ancients knew nothing of the, comparatively, very recent system of domestic bell hanging. "So many centuries," says a writer, "did it take to conduct mankind to the simple invention of ringing a bell, in a horizontal direction, with the use of a crank and a piece of wire."

Large bells, or those of expanded form, it is generally stated, were first made by the Christians, but they were undoubtedly used in China, in religious worship, at least two thousand years before the Christian era. It is not fully known who was first to introduce bells into Christian churches. Many writers claim that Paulinus, Bishop of Campania, in Nola, first used them, in the year 400, but he makes no mention of bells in a detailed account of his churches. One writer states that this person simply suspended a large brass kettle, which, upon being struck, notified the inhabitants when prayers began. Others assert that church bells were first used by Pope Sabinianus about the year 600, to distinguish the canonical hours: but we read of bells being in use by the Bishop of Llandaff, in his churches, in the year 550. Certain is it that "Christian architecture" and

the introduction of turret, or church bells were nearly coeval events, and that it was, solely, for the support of bells that church towers were first erected. Indeed, bells were early regarded as a necessary attachment to every church edifice, the same as is quite commonly believed, in many localities, at the present day. This fact is clearly recognized in a canon of the Church of England which specially directs that "parishes must furnish bells and bell ropes."

Associated, in various ways, with the ancient ritual of the church, bells seem to have acquired a kind of sacred character, and for many years, in Europe, the bell founderies appear to have been set up in the religious houses and the founding attended with great ceremonies, the abbots, priests, and frequently the bishops, being the master manufacturers. For a long while, it was the priest's office to ring the bells. By the Roman Catholics, bells were early blessed, with solemn ceremonies, as they were consecrated to the duty of calling worshippers to their religious rites. The bells were also washed and named, and it was a frequent custom to give sponsors to them. This custom is common at the present day, the sponsors now, as then, usually being persons who have donated the bells to the church in whole or in part. An account is given of the great bell of the Lateran church, being named, in the year 968, by the Pope John XIII. for himself, John.

Prior to the use of church bells, religious assemblies were convened by various means. The Egyptians used trumpets after the manner of the Jews. The Chinese employed "sounding stones," suspended by cords. In some of the monasteries the office was taken in turns of going about to each one's cell, and, with the knock of a hammer, calling the monks to church. In the monastery of the Virgins, at Jerusalem, the signal was given

by one singing *Hallelujah*. At one time it was the custom to summon the congregation to worship by persons, who were termed "God's runners," going about from house to house. The Turks were assembled by means of wooden boards, or iron plates full of holes, struck upon by a hammer. Unlike other nations these strange people have not adopted the use of bells, and their call to prayer is now proclaimed by the voice of the muezzin from the summit of the minaret.

In the middle ages bells had attained a very prominent position in the service of the church and community. An old writer describes their general uses as follows :

"To call the fold to church in time,  
We chime.  
When joy and mirth are on the wing.  
We ring.  
When we lament a departed soul,  
We toll."

Many of their special uses were designated by the names given to certain bells.

Thus the *Ave Maria* or *Angelus bell*, which was tolled three times each day, and at its hearing every one was enjoined to betake himself to meditation and prayer.

The *Vesper bell* was the call to evening prayer.

The *Complin bell* summoned the people to the last religious services of the day.

The *Sanctus bell* was always rung at the words "*Sanctus, sanctus, sanctus, Dominus Deus Sabaoth*," and whoever heard it was expected to prostrate himself.

These uses of the bell are still fully observed in the Roman Catholic Church.

The *Passing bell* was so named as being tolled when any one was passing out of life, that those who heard it might pray for the soul that was leaving this world. From this custom, doubtless, sprang that, quite com-

mon in many parts of the world, of slowly tolling the bell at deaths, or while funerals are being conducted, as a mark of respect to the deceased.

The *Curfew bell* (*couvre feu*) was rung as a signal for the inhabitants, who lived in wooden houses, to put out their fires and retire for the night, and though, for ages, its only use has been to "toll the bell of parting day," the practice, in many countries, is still kept up, and, as an English writer says, "There are few, who have been accustomed to its sound, that would not feel, if it was hushed, that a soothing sentiment had been taken out of their lives."

Excommunication by "bell, book and candle" was an old practice in the Roman Catholic Church. The people were summoned by the sound of a bell, the anathema was pronounced out of a book, and the candles were extinguished as emblematical of the extinction of hope in the sinner's soul.

The *Tocsin* or *alarm bell* was in early use, and was generally suspended in castles and fortresses to announce the approach of the enemy. Thus we find that when Macbeth had shut himself in the fortress of Dunsinane, and it was announced to him that Birnam Wood was moving onward to the castle, his desperate order was, "Ring the alarum bell!" Upon peals of bells the alarm was given, by ringing the bells in the reverse manner—that is from the lowest in tone to the highest. Bells are still commonly employed for alarm purposes, and, as against fire, their use, in many sections, has been greatly systematized in the manner of signaling the exact location of danger.

Bells were, at first, as has been stated, of a form quite unlike that seen at the present day. The Chinese formerly made their bells nearly square in shape. At one time it was the custom to make bells of several pieces



of metal welded together, but these necessarily lacked vibration and were useless. The materials employed in the manufacture of the oldest bells of which we have any record, were, however, the same as those now in use, namely, copper and tin; the proportions, alone, being different. And here it might be stated that the long experience of the ancients, as well as the careful tests of later years, has clearly proven that these are the only metals capable of producing a proper ringing alloy. Iron and steel, and even silver and gold, frequently entered into the composition of bell-metal, in whole or in part, but solely to the injury of the tone. The first two named metals have been found the least adapted for use in this manner, owing to the harsh and disagreeable sounds which they are, alone, capable of producing, while, on the other hand, silver and gold, being more in the nature of lead, as compared with copper and tin, are incapable of producing the full, clear tone requisite in a bell. "Persons," says an English writer, "speak as familiarly of sweetening the tone of a bell, by the introduction of a little silver, as they would of sweetening a cup of tea with a lump of sugar. This is a dream." Quite as great a mistake, as the above, is in the common belief that our ancestors employed silver, more than ourselves, in the manufacture of bells, except that it was customary to cast a few tributary coins into the furnace during the process of melting. It is unnecessary, perhaps, to add that the quality of a bell depends not only upon the nature of its composition, but equally as much upon its shape and the proper proportions of its height, width and thickness.

The tone of a bell, it is well known, is the result of its vibrations. When struck, a bell changes shape, and these repeated changes constitute its vibrations. At one moment a bell is an oval, with its longest diameter

at exact right angles to the position of its longest diameter at the preceding instant. The number of vibrations produced in a bell, in a given time, varies directly as the square of the thickness, and inversely as the bell's diameter, or as the cube-root of its weight. By this knowledge the production of any given tone in a bell is readily secured. In a number of bells forming a complete octave the diameters would appear in the following proportion: C 1, D 8-9, E 4-5, F 3-4, G 2-3, A 3-5, B 8-15, C 1-2. In fact the diameters of bells correspond to the lengths of musical strings. In proof of this principle some instruments of bells, to which violin bows were attached, were produced in Italy many years since. It might be stated that the tone of a bell, as it reaches the ear, is made up of different tones blended. Like other sounds, that of a bell is readily reflected. There is, also, a force in the sound-waves, so called, of a bell, which is readily perceived by any one standing near a bell of considerable size when ringing. Even the Swiss muleteers are said to tie up their little bells, at certain places, lest their tinkle should shake the delicately poised snow and bring an avalanche down. The distance to which the sound of bells under peculiar circumstances of air and other surroundings, is often heard, is exceedingly remarkable, and this fact has frequently given credence to the pleasing illusions of sailors at sea and travelers upon the desert, thousands of miles from home, listening, in trembling wonder, to the sounds of their own village bells.

"If a bell have any sides the clapper will find 'em," said Ben Johnson, and yet the proper ringing of bells is a matter requiring considerable experience and skill. In some parts of the world this practice has been entered into with much spirit, especially so in England, where it has become truly national, and has secured for

that country the title of the "Ringing Isle." The same feeling prevades the literature of English bell ringing, which, from the simple nursery rhyme of "Gay go up and gay go down, to ring the bells of London town," becomes quite startling in the *plain bob triples*, *bob majors*, *bob majors reversed*, *double bob majors* and *grandsire bob caters* of the player's role, and yet one enthusiastic writer published, in 1618, a book of 475 pages to prove that the principal employment of the blessed in heaven will be the continual ringing of bells. "Great," says Southey, "are the mysteries of bell ringing. And this may be said in its praise, that of all devices which men have sought out for obtaining distinction by making a noise in the world, it is the most harmless." The number of *changes* which can be played upon a chime of bells is almost marvelous, twelve bells allowing a no less number than 479,091,600. Chimes, on the continent of Europe, frequently consist of forty or fifty small bells, and are played by means of a barrel like that in a hand organ, or by clock-work. The *carillons*, also composed of small bells, are very common throughout the Netherlands and are played like a piano-forte.

As would be generally supposed, superstition early enlisted bells into her service. Josephus says that the ancients regarded them as signifying thunder. In many cases they were looked upon as the signals of victory and dominion. Historians state that, in the year 610, the army of Clotharius was frightened from the siege of Sens by the ringing of the bells of St. Stephens, and that Calixtus III. employed the same device against the dreaded Osmons. It was long imagined that the ringing of bells had power to avert the destruction of lightning, storm and pestilence, though, in later days, this influence was frequently ascribed to

natural, rather than to supernatural causes, in the belief that their sound purified the air. Even at the present day it is the custom, throughout the vinelands of France, to ring the bells at the approach of storms, for the purpose, and to the effect, as generally supposed, of breaking the impending clouds. It was, also, a common belief, that the sound of bells struck with terror the evil spirits, which, it was thought, were in waiting to seize upon a soul departing from the body, and, in order to accomplish this purpose the more effectually, bells were, frequently, made of monstrous size. In view of their use in this manner, many persons bequeathed large sums of money for the support of favorite bells which were rung at the time of their decease. There is a bell in England, called "Black Tom of Scot Hill," which is said to have been an expiatory gift for a murder. This bell is tolled on Christmas Eve, as at a funeral, and its ringing is called the "Devil's Knell," under the supposition, that the devil died when Christ was born. It was a popular idea that demons, affrighted by the sound of bells calling Christians to prayers, would flee away. In respect to this idea says an old writer on bells: "They are they that must make all things well; they must drive away the devil. If all the bells in England should be rung together at a certain hour, I suppose there would be almost no place but some bells might be heard there, and so the devil would have no abiding place in all England." The Turks, however, believed that the sound of bells disturbed the repose of souls, which, as they supposed, wandered in the air. They also regarded them as the symbols of sinful infidelity and a most dangerous foe, and hence forbade the Greek Christians the use of bells after the taking of Constantinople. Many stories are related of bells which would not suffer themselves to be carried

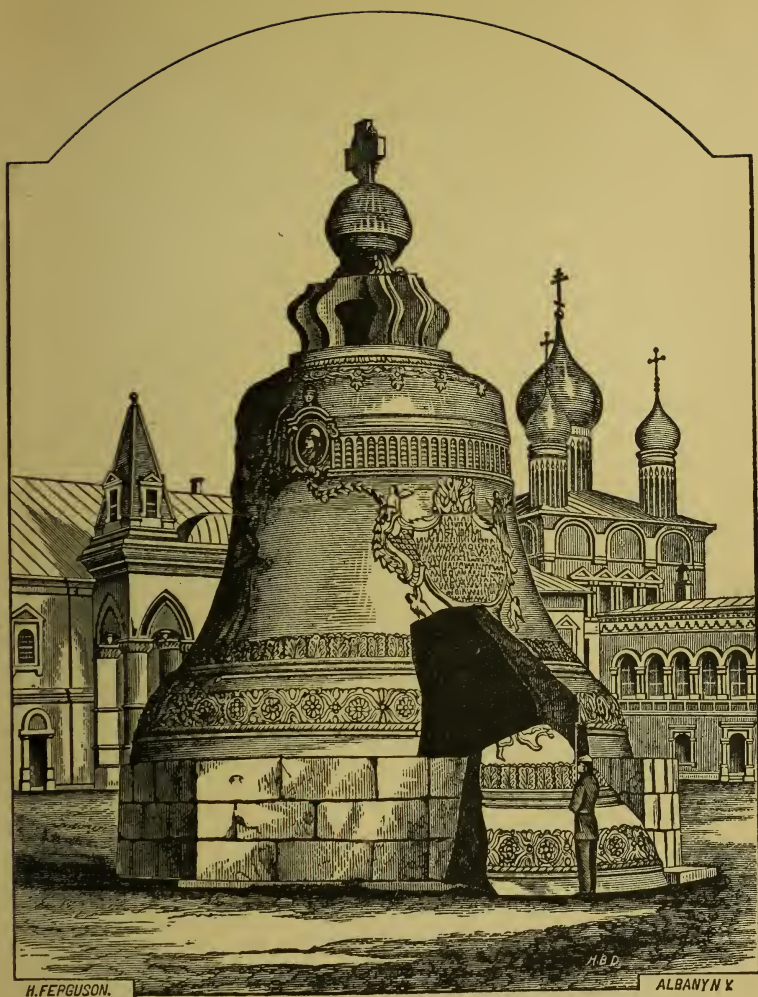


ried away from their proper resting places, or which, if carried away, would instantly become dumb. Severe judgments were predicted against those who destroyed, carried away, or in any manner misused bells, and special honor was conferred, it was supposed, upon any one born within the sound of certain bells. Believers in dreams and fortune prophecies had long delight in the fancy which directed them to "consult the bells," ever sure to clearly answer out the messages most earnestly desired. Familiar to all is the pleasing story of the Bells of Bow calling back the poor runaway apprentice by their cheering burthen—"Turn again, Whittington, thrice Lord Mayor of London." The supposed superhuman influence of bells, possibly, had its culmination in the belief that certain bells had the power to cure lunacy; "a belief which," says a writer, "would now, of itself, be an indication of the disease."

Akin to this superstitious feeling is the sincere affection with which bells have, often, been regarded. It is said of a friar that, upon the destruction of his monastery, he regretted nothing so much as the loss of a favorite bell which, after diligent search, he found had been removed to a village church, where he submitted himself to become a common laborer that he might end his days within hearing of it. Even the mighty conqueror of Europe was deeply stirred by the sound of bells. "When we were at Malmaison," says Bourrienne of Napoleon, "how often has the booming of the village bell broken off the most interesting conversation. He stopped, lest the moving of our feet might cause the loss of a single beat of the tones which charmed him. The influence, indeed, was so powerful that his voice trembled with emotion, while he said: 'That recalls to me the first years I passed at Brienne.'" Most touching, however, is the tradition told

in connection with the peal in Limerick Cathedral. It is said to have been brought from a convent in Italy, for which place it had been manufactured by an enthusiastic native, with great labor and skill. The Italian, having acquired a competency, fixed his home on the convent cliff, and for many years enjoyed the daily chimes of his beloved bells. But in some political convulsion which ensued, the monks were driven from their monastery, the Italian from his home, and the bells were carried away to another land. After a long interval the course of his wanderings brought him to Limerick. On a calm and beautiful evening, as the vessel which bore him floated along the broad stream of the Shannon, he suddenly heard the bells peal forth from the Cathedral tower. They were the long lost treasures of his memory. Home, happiness, friends—all early recollections were in their sounds. Crossing his arms on his breast he lay back in the boat. When the rowers looked around they saw his face still turned toward the Cathedral, but his eyes had closed forever on the world.

Any history of bells would be far from complete without a reference to the great bells of the world. In the city of Moscow, alone, before the revolution, there were several hundred large bells, and this number has been greatly increased. The simple fact that the Russians regard the sound of bells, not only as a holy summons to church, but as a part of the very act of worship, readily accounts for their love for bells and their extravagance in procuring them. Travelers inform us that the Russians never tire of ringing their heavy bells, and that in Moscow on the Sabbath day, the sounds, which are produced without any regard to harmony, are absolutely painful to the ear, and prove an effectual check to conversation on the streets. The



THE GREAT BELL OF MOSCOW (TSAR KOLOKOL.)





"Great Bell of Moscow," or Czar Kolokol (emperor of bells) deserves first notice. This is, by far, the largest bell in the world. Its weight is about 440,000 pounds, and its cost, in simple bell material, is estimated at above 300,000 dollars, to which, reliable writers inform us, upwards of 1,000,000 dollars were added in precious jewels, plate, &c., by the nobles, at the time of casting. The dimensions of this bell are about twenty-one feet in height, and twenty-two feet in diameter. It was cast by order of the Empress Anne, in the year 1734, from the metal of a gigantic predecessor which had been greatly damaged, and is ornamented on the side with several figures, one of which represents the Empress in flowing robes. It is not suspended. Dr. Clarke in his "Travels" says, "The Russians might as well have attempted to suspend a first-rate line-of-battle ship with all its stores and guns," but this is a mistaken idea. The bell was originally suspended from beams, which, being destroyed by fire in 1737, permitted the heated bell to fall to the ground and break, since which time it has remained dumb. The Emperor Nicholas had it raised in 1837, and placed upon a low circular wall in the Kremlin. It is now consecrated as a chapel, the opening in its side being large enough to admit two men standing abreast. The bell is carefully guarded, and the Russians will not allow a single particle of its metal to be taken away.

There is another monstrous bell in Moscow, given by the Emperor Boris Godunof to the cathedral of Moscow, weighing upwards of 120,000 pounds. This bell is suspended in the tower of Ivan Veliki, and when it is rung, which is thrice in a year, all of the other bells are silent. Its mighty voice is said to "produce a tremulous effect throughout the city, and a noise

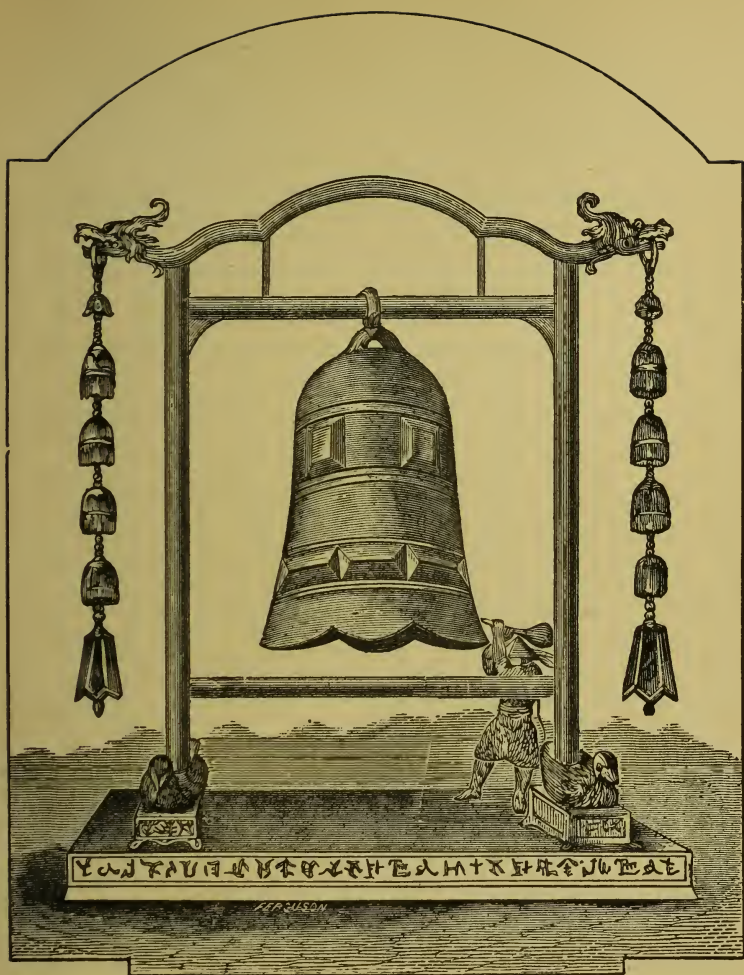


like the roaring of distant thunder." There are, in this same tower, thirty or forty other bells, which, though of less size, are enormous; some of them weighing many tons. The bells of Russia are fixed, immovably, to their beams. Their tongues are slung by means of leather bands and are moved by ropes drawn in such a manner as to cause the blows to fall upon the surface at three points instead of in two places, directly opposite to each other, as in the general and natural custom.

The bells of China (in which country large bells had their origin) rank next in size to those of Russia. Indeed, it is not uncommon, throughout China, to see enormous bells lying upon the ground, their weight having broken down the towers in which they were suspended. Though possessed in great number, each bell seems to be of excellent workmanship, and nearly all are richly ornamented with inscriptions, both inside and out. These bells have not the merit of a tolerably fair tone, like those of the Russians, and are of most inferior shape, while their dullness of sound is increased by their being struck with wooden mallets instead of iron clappers. Both the bells of China and its gongs, the latter of which are famous, are made of a peculiar alloy quite remarkable in the hideous tones which it is capable of producing.

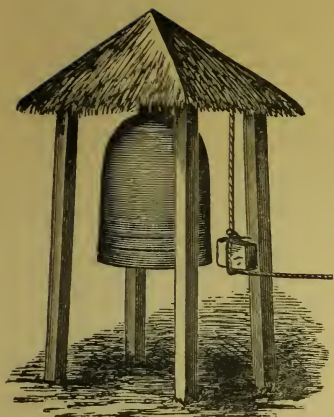
The "Great Bell of China," in Pekin, weighs 120,000 pounds, and is fourteen feet in height and twelve feet in diameter. In Nankin there is a bell, now fallen to the ground, which weighs 50,000 pounds.

In Japan, bells are very commonly used. They are much the same in form and composition as the bells of China, and are found in every size and number. They are suspended in low towers, near the temples, and are sounded by means of wooden beams, swinging from the



THE GREAT BELL OF CHINA.





roof, to which straw ropes are attached. In entering a temple in Japan, or at the commencement of worship, it is the custom to sound the bell in order to arouse the deity, and have him wide awake to the calls of the devout. Herewith is illustrated a Japanese bell.

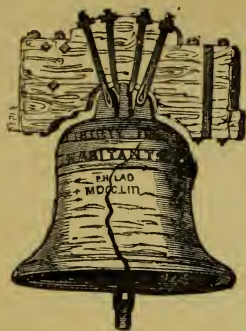
The bells of Holland and Belgium are also remarkable for their size and number. "They are hung," says a writer, "about every church and public building, in endless variety, and, as the inhabitants are enthusiastic in their fondness for bells, they are never left at rest."

In Bruges, Belgium, there is a single tower which contains no less than ninety-nine bells.

Below are given the weights of several of the so-called large bells of the world:

A bell in Vienna weighs 40,000 lbs. In Olmutz there is one of equal weight. A bell in Rouen, France, subsequently cast into other form, weighed 36,000 lbs. The largest Westminster, England, bell weighs about 30,000 lbs. There is a very fine bell, of same weight, in Erfurt, Germany. A bell in the cathedral at Montreal, which is the largest bell in America, weighs about 25,000 lbs. One in *Notre-Dame* cathedral, at Paris, is of same weight. St. Peters, of Rome, weighs 17,500 lbs. "Great Tom," of Oxford, weighs 17,000 lbs. At Rennes, France, there is a celebrated clock bell which weighs 16,000 lbs. The bell "Jacqueline," of Paris, cast in 1400, weighed 15,000 lbs. "Great Tom," at Lincoln, weighs 12,000 lbs. St. Paul's, of London, a noted bell, weighs 11,500 lbs

A bell of special interest in this country, is the famous "Liberty Bell." This bell was cast for the State House in Philadelphia, in the year 1751, and upon it



Congress met in the State House, were placed the words of the Bible :  
*"Proclaim Liberty throughout all the land to all the inhabitants thereof."*

It was under this bell that the representatives of the thirteen colonies first "proclaimed liberty," and this bell, with its iron tongue, started the tidings throughout the land. The bell was, subsequently, broken when ringing a fire alarm. It is now suspended, by a chain of thirteen links, from the ceiling in the hall of the State House in Philadelphia.

Some of the inscriptions found upon bells are interesting, in showing the religious feeling, superstition, or amusing sentiment prevailing at different times and places.

The following are in the form of invocation :

"May my sound please Thee, O Christ, Heavenly King."

"Our motion speeds the Redeemer's praise."

"Jesus regard this work, and by Thy strength prosper it."

The following are of more recent adoption :

"Oh come, let us worship."

"Make a joyful noise unto the Lord."

"Holiness unto the Lord."

"Let him that heareth say, Come."

"My tongue shall speak of Thy praise."

"Glory to God in the highest."

The following, in whole or in part, is often found on both old and new bells :



*Laudo Deum verum,  
Plebem voco,  
Congrego clerum,  
Defunctos ploro,  
Pestem fugo,  
Festa decoro,*

(I praise the true God,  
I call the people,  
I convene the clergy,  
I bewail the dead,  
I dispel the pestilence,  
I grace the festival.

*Funera plango,  
Fulgura frango,  
Sabbata pango,  
Excito lentos,  
Dissipo ventos,  
Paco cruentos.*

I bemoan the burial,  
I abate the lightning,  
I announce the Sabbath,  
I arouse the slothful,  
I dissipate the winds,  
I appease the revengeful.)

Upon a bell in Cambridgeshire is the following :  
“*Dulcis sisto melis campania vocor Gabrielis.*” (I am  
called the sweet-toned bell of the Angel Gabriel.)

On an alarm bell at Ghent—

“*Apnen naem is Roland ; als ik kley is er brand, and als ik  
fun is er victorie in het land.*” (My name is Roland ; when  
I toll there is fire, and when I ring there is victory in  
the land.)

The great bell at Rouen bore the following :

“*Je suis George d'Ambois,  
Qui ai trente-cinque mille pois ;  
Mais lui qui me pesera,  
Trente-six mille me trouvera.*”

An old translation of above, poorly rendered, is as  
follows :

“*I am George of Ambois,  
Thirty-five thousand in pois ;  
But he that shall weigh me  
Thirty-six thousand shall find me.*”

On a fire bell in Shelburne—

“*Lord ! quench this furious flame ;  
Arise, run, help, put out the same.*”

On one in Derbyshire—

“Mankind like me are often found,  
Possessed of naught but empty sound.”

On one in Worcestershire—

“If you would know when we was run,  
It was March the twenty-second, 1701.”

On a bell at Binstead—

“Samuel Knight made this ring,  
In Binstead steeple for to ding.”

On one in Oxfordshire—

“I ring to sermon with a lusty boome,  
That all may come and none stay at home.”

On one in Berkshire—

“At proper times my voice I'll raise,  
And sound to my subscriber's praise.”

On one in Warwickshire—

“I sound to bid the sick repent,  
In hope of life when breath is spent.”

On one in Hampshire—

“Unto the church I do you call,  
Death to the grave will summons all.”

On one in Derbyshire—

“When of departed hours we toll the knell,  
Instruction take and use the future well.”

On one in the Carlisle cathedral—

“I warn ye how your time passes away. Serve God, therefore, while life doth last, and say *Gloria in Excelsis Deo!*”

On the great bell of Glasgow cathedral—

"In the year of grace, 1594, Marcus Knox, a merchant in Glasgow, zealous for the interests of the reformed religion, caused me to be fabricated in Holland for the use of his fellow citizens of Glasgow, and placed me with solemnity in the tower of this cathedral. My function was announced by the impress on my bosom, 'Ye who hear me, come to learn of my holy doctrine,' and I was taught to proclaim the hours of unheeded time. One hundred and ninety-five years had sounded their awful warnings, when I was broken by the hands of inconsiderate and unskillful men. In the year 1700 I was cast into the furnace, refounded at London, and returned to my sacred vocation. Reader ! thou also shalt know a resurrection—May it be unto eternal life !"

Of bells, it can, with truth, be said that, ever since their introduction, they have been highly regarded by all nations, the Turks, alone, excepted. Even the Puritans, though the enemies of church music, and of almost everything which had been put to superstitious uses, did not wage direct war against bells. Certainly, there is nothing of simple human contrivance for which community, in any locality, has stronger regard, or with which associations are more deeply mingled. And there is that in the associations connected with bells which has caused them to be considered, throughout past ages, as not inappropriate memorials to departed relatives or friends.

Says a distinguished English writer : "From youth to age the sound of the bell is sent forth through crowded streets, or floats, with sweetest melody, above the quiet fields. It gives a tongue to time which would, otherwise, pass over our heads as quietly as the clouds, and lends a warning to its perpetual flight. It is the voice of rejoicing at festivals, at christenings, at marriages, and of mourning at the departure of the soul. From every church yard it summons the faithful of distant valleys to the house of God ; and when life is ended, they sleep within the bell's deep sound.

Its tone, therefore, comes to be fraught with memorial associations, and we know what a throng of mental images of the past can be aroused by the music of bells” :

“ O, what a preacher is the time-worn tower,  
Reading great sermons with its iron tongue.”

Adds the same writer : “ The sound of bells has traveled with the light that has lighted the Gentiles ; and, now that the Gospel has penetrated the most distant parts of the globe, there is not, perhaps, a minute of time in which the melody of bells is not, somewhere, rising towards heaven.”

The praise of bells has been the poet's theme in all ages, than which no subject has produced deeper emotion, or inspired more tender feeling.

Very touching are the familiar lines of Moore :

“ Those evening bells ! those evening bells !  
How many a tale their music tells,  
Of youth and home, and that sweet time  
When last I heard their soothing chime.”

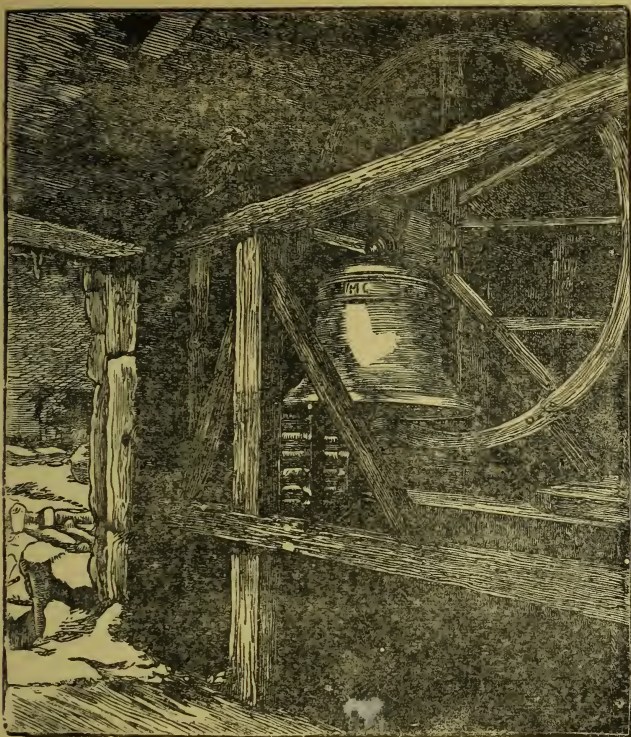
Most exquisite is the poem of Father Prout on

“ The bells of Shandon,  
That sound so grand on  
The pleasant waters  
Of the river Lee.”

Said Charles Lamb : “ Of all sounds of bells (bells the music nighest bordering on heaven) the most solemn and touching is the peal which rings out the old year.”

Tennyson, in his poem entitled “ The Death of the Old Year,” (to which a beautiful illustration is given,) expresses the same feeling :





“Toll ye church bell sad and slow,  
And tread softly and speak low,  
For the old year lies a dying.”

In the words of the German song :

“BELL ! thou soundest merrily  
When the bridal party  
To the church doth hie !  
Bell ! thou soundest solemnly  
When, on Sabbath morning,  
Fields deserted lie !

“Bell ! thou soundest merrily ;  
Tellest thou at evening,  
Bed time draweth nigh !  
Bell ! thou soundest mournfully,  
Tellest thou the bitter  
Parting hath gone by !



“ Say ! how canst thou mourn ?  
How canst thou rejoice ?  
Thou art but metal dull !  
And yet all our sorrowings,  
And all our rejoicings,  
Thou dost feel them all ! ”

Says Schiller, in his “ Song of the Bell ” :

“ Let it discourse of solemn things,  
With sounds metallic rend the sky,  
And let the hours with rapid wings  
Fail not to stir it as they fly.  
To dumb fate it a tongue shall lend ;  
Heartless *itself*, not made to feel,  
Yet shall its swinging strokes attend  
Each turning of life's giddy wheel,  
And as its peal upon the ear  
Falls heavily and dies away,  
'Twill teach how naught abideth here,  
How all things earthly must decay.”

013  
M52  
pam

**MENEELY & KIMBERLY,**

**TROY, N. Y.,**

MANUFACTURERS OF

CHURCH, ACADEMY, TOWER-CLOCK,  
FACTORY, CHIME, COURT-HOUSE,  
FIRE-ALARM, AND OTHER

**BELLS,**

MOUNTED IN THE MOST APPROVED MANNER

AND

FULLY WARRANTED.

---

OFFICE AND FOUNDRY,  
22 AND 24 RIVER STREET, TROY, N. Y.















UNIVERSITY OF ILLINOIS-URBANA



3 0112 086065015